

REMARKS

The reopening of the prosecution of the application is noted. Applicant elects to file a reply.

Claims 8-25 were rejected under §112, first paragraph. Reconsideration and withdrawal of the rejection are respectfully requested.

The Official Action states that the specification does not disclose a restraint that urges the contact surface to remain in the detent position when a first pressure is applied to the contact surface by a fingertip and that permits movement below the detent position when pressure on the contact surface is greater than the first pressure and above the detent position when pressure on the contact surface is less than the first pressure. The Examiner points to page 6, lines 15-17, which state that when contact surface 6 is pushed down to lock mechanism 8, contact surface 6 is locked by lock mechanism 8.

However, the Examiner still has not addressed page 9, lines 22-24, which state that the click impression "prevents insufficient and surplus pressure of the fingertip." It is believed that one of skill in the art will know what this reference to "surplus pressure" means and how this statement relates to the invention disclosed. Specifically, one of skill in the art will know that the lock mechanism 8 provides a click impression that indicates when the pressure on contact surface 6 is sufficient, that if there is insufficient pressure the click

impression will not be obtained and if there is surplus pressure the click impression will not be obtained. Further, it will be apparent to one of skill in the art (and the Official Action does not address why it would not be apparent) that the way to avoid a click impression when the pressure is too high is to move the contact surface below the detent position and override the lock mechanism. That is, if the user applies too much or too little pressure, the click impression is not made (except for a momentary passage through the click impression when the pressure is too high) and the fingerprint detecting unit 11 is not operated. The lock mechanism helps the user apply the correct pressure to the contact surface by providing a reference position that the user's fingertip is to maintain.

Note also that the holder 10 extends above and below the predetermined position. There is nothing to prevent the contact surface from moving below the predetermined position if too much pressure is applied to the contact surface. The Official Action does not dispute this.

Indeed, the object of the invention is to reduce pressure variation on the contact surface. To this end, the device must provide consequences when the pressure is too low and too high. If the downward pressure is too low, the contact surface will move up, breaking contact with the switch. If the downward pressure is too high, the contact surface will move down, breaking contact with the switch. If the device has no

consequences for application of too much pressure, the pressure would not be uniform; that is, the pressure could vary so long as it is above the pressure needed to push the contact surface into the predetermined position. Upon reading the specification in its entirety, including the second paragraph on page 9, one of skill in the art will recognize that the user must adjust fingertip pressure to hold the click impression to avoid turning OFF switch 9 and that too much pressure and too little pressure will avoid the click impression and turn OFF switch 9.

Accordingly, for the reasons given above, the contact surface must move below the detent 10a when pressure on the contact surface is greater than the desired (first) pressure. The specification describes the subject matter of claim 20 in such a way as to reasonably convey to one skilled in the art that the inventor had possession of the claimed invention at the time the application was filed.

New Figure 7 has been added that shows the projected portion 6b below the recessed portion 10a under the influence of surplus pressure. Entry of the new figure and withdrawal of the objection to the drawings are respectfully requested. For the reasons noted above, the figure does not add new matter to the application.

Claims 20-24 and 8 were rejected as unpatentable over YASAKU (JP 63-5551) in view of FILIP 4,025,748, claim 25 was rejected further in view of MURATA 4,642,433, claims 9-10, 12-16,

and 18 were rejected further in view of ITSUMI et al. 5,559,504, claims 17 and 19 were rejected further in view of LUBKE (DE 29 52 212), and claim 11 was rejected further in view of TSIKOS 4,353,056. Reconsideration and withdrawal of the rejections are respectfully requested.

Claim 20 has been amended to indicate that the detecting unit detects a fingerprint "only" when the contact surface is in the detent position. None of the suggested combinations discloses or suggests this feature and thus the claims are believed to avoid the rejections under §103.

YASAKU discloses a device that includes a switch 4 that makes a fingerprint detection when sufficient pressure is applied to the detector 1 by a finger to make contact between movable and fixed portions 12 and 13. However, the device continues to make a detection when too much pressure is applied to the detector 1. There is no provision in YASAKU for breaking contact when "surplus" pressure is applied to the detector 1. As noted in the Official Action, the detector 1 can move below a position at which contact is made when too much pressure is applied. This appears to be correct, but not relevant since the claim requires that the detecting unit detect a fingerprint only when the contact surface is in the detent position and that the contact surface moves below (out of) the detent position when too much pressure is applied.

The Official Action does not point to any other reference for a suggestion to move the contact surface below the detent position when too much pressure is applied and to make the fingerprint detection only when the contact surface is in the detent position. Accordingly, the claims avoid the rejections of record.

The Official Action acknowledges that YASAKU does not disclose the restraint having a detent position at a depressed location and urging the contact surface to remain in the detent position when a first pressure is applied to the contact surface, and attempts to rely on FILIP for this feature. The switch in FILIP is for "snowmobiles, motorcycles, lawnmowers, etc.," all machines made for rough treatment in the outdoors where the most likely source of application pressure is a heavy-handed thumb or finger pushed as hard as possible. One of skill in the art of fingerprint detection, especially the art of ensuring consistency of the application pressure, would not turn to such a device for a suggestion about switch pressure. Further, FILIP states that the switch will remain locked in a position when pressed (column 1, lines 18-22). This is opposite the operation of the present invention, in which the user can apply too much pressure and override the urging of the restraint.

The Official Action also indicates that the motivation to combine these references is to prevent deviation of the pressure applied by the fingertip onto the contact surface.

However, as noted above, FILIP does not do this at all. The user can apply any pressure and the switch will remain locked. Further, there is nothing in FILIP to suggest to the artisan that the switch could be used for such a purpose. There is no art of record that indicates why these references should be combined. The Official Action offers a reason that is not supported by any art of record, and which appears to be drawn impermissibly from the applicant alone.

The remainder of the references are relied upon for features unrelated to the above. Accordingly, the claims avoid the rejections of record.

In view of the present amendment and the foregoing remarks, it is believed that the present application has been placed in condition for allowance. Reconsideration and allowance are respectfully requested.

Attached hereto is a marked-up version showing the changes made to the specification and claims. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE."

Respectfully submitted,

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"VERSION WITH MARKINGS TO SHOW CHANGES MADE"

IN THE SPECIFICATION:

Page 9, the second paragraph has been rewritten, beginning on line 15, as follows:

--On the other hand, a click impression or a feeling of engagement from the lock mechanism 8 can inform the user whether the pressure of the fingertip is sufficient or not. In other words, a user can adjust the pushing power of the fingertip until the click impression is obtained. Until the click impression is obtained, the user continues to push the contact surface 6 and may increase the pressure. Thus, the click impression notifies the user of unnecessary of pushing the contact surface 6 any more. Therefore, the click impression prevents insufficient and surplus pressure of the fingertip. Figure 7 shows the projected portion 6b below the recessed portion 10a under the influence of surplus pressure.--.

IN THE CLAIMS:

Claim 20 has been amended as follows:

--20. (amended) A device for detecting a fingerprint of a fingertip placed on a contact surface that moves up and down and is part of a fingerprint input section, the device comprising:

a moving element opposing downward movement of the contact surface when the contact surface is pressed downward by a fingertip whose fingerprint is to be detected;

a restraint having a detent position at a depressed location of the contact surface and urging the contact surface to remain in the detent position when a first pressure is applied to the contact surface by a fingertip and permitting movement of the contact surface below the detent position when pressure on the contact surface is greater than the first pressure and above the detent position when pressure on the contact surface is less than the first pressure; and

a detecting unit detecting a fingerprint on the contact surface only when the contact surface is in the detent position.-